

USSR

UDC 669.295.046.78

DENISOV, S. I., RASPOPIN, V. G., and DEGYAREV, B. S.

"Significance of the Limit of Charge Briquetting in the Melting of Titanium Concentrates"

Sb. tr. Vses. n.-i. i proyekt. in-t titana, [Collected works of All-Union Scientific-Research and Planning Institute for Titanium] 6, 1970, 12-15, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. 176 by the authors).

Translation: It is established on the basis of results of studies of the melting of powdered and briquetted charges of Fe-Ti concentrate from the Samotkanskiy deposit (64% TiO_2 , 24% FeO), performed in an open type

commercial furnace with a power of 10,500 kva, that the time during which current is applied to the furnace is significantly higher when powdered titanium is used (95.5%) than when briquettes are melted (90.5%) due to the reduction in standing time between melting cycles. The productivity of the furnace as to slag is higher when the powdered charge is melted than when briquettes are melted (3.40 rather than 3.27 t/hr). However,

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DENISOV, S. I., RASPOPIN, V. G., and DEGYAREV, B. S. Sb. tr. Vses n.i. i proyekt. in-t titana, [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 12-15, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1970, Abstract No. 1G176 by the authors).

when this charge is melted, increased losses in concentrate occur as dust carried away with the exhaust gases (3.6% more), which can be reduced by covering the furnace with an arch and organizing a system of dust traps. Technical-economic calculations have shown that the advantages produced in melting of a briquetted charge do not justify the high expenses involved in producing the briquettes, so that melting of a powdered charge is more profitable. 2 tables.

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USSR

UDC 669.295.053.24

DEGTYAREV, V. S., DENISOV. S. I., DENISOVA, N. V., KIPRICH, N. A., AND GOBOV, A. P.

"Testing the Process of Melting of Titanium Slags on the Basis of Changing Electrical Resistance"

Sb. tr. Vses. n.-i. i proyekt. in-t titana [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 27-29, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. 1G188 by the authors).

Translation: Results are presented from a study of the electrical resistance of granulated Ti slags as a function of various factors at 25°. As the content of FeO changes from 15.49 to 2.5%, the resistivity of Ti slag with a grain size of less than 0.1 mm decreases from $3.08 \cdot 10^{-5}$ to $1.41 \cdot 10^{-5}$ ohm·cm, i.e., by 218 times. Testing of the reduction electric melting of Ti concentrates, consisting of determination of FeO during the course of the process, can be performed by determining the electrical resistance of the slags. 2 figures; 1 table.

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Titanium

USSR

UDC 669.295

DENISOV, S. I., BLINOV, B. S., SHAKHRAY, I. M., and TITOMER, B. P.

"Magnetic Separation of Titanium Slag"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 7-12

Translation: An industrial electromagnetic separator was used in a study of conditions for separating crushed titanium slag as a function of the magnetic induction of the electromagnet, the magnitude of the slag particles, and the height of the layer. It is shown that, under optimal conditions for separating slag, it is possible to remove 70-80% of all metallic iron from it into the magnetic fraction and to obtain slag with a metal content of not more than 0.4-0.5 %. The expediency is shown of separating large slag parts (of a class greater than two millimeters), in which most of the metallic iron is concentrated independently. Two illustrations, three tables, and four bibliographic entries.

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USSR

UDC 669.295.04

MOROZ, Yu. A., and DENISOV, S. I.

"Technological Specifics of Carrying Out a Single-Stage, Continuous Process of Melting Titanium Slags"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 15-17

Translation: The article reviews causes of disruption in the one-stage continuous process of smelting titanium slag, such as: slag blistering, the processes of melting down the charge in advance of the processes of restoration, rapid melting near the electrode spaces, charge caking on top of the furnace, and the formation of refractory "salamanders" in the furnace charge. These technological difficulties are eliminated where large ratios of furnace capacity to the mass of charge in the furnace are ensured, which takes place during smelting in one-phase, one-electrode furnaces or where wood by-products are used in the charge during smelting in the ordinary three-phase, three-electrode electric furnaces. Eight bibliographic entries.

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USSR

UDC 669.259-04

DEGTYAREV, V. S., DENISOV, S. I., DENISOVA, N. V., KIPRICH, N. A., and
GOBOV, A. P.

"On Controlling the Process of Smelting Titanium Slags by Change in
Electric Conductivity"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya
Publishing House, Vol 6, 1970, pp 27-29

Translation: Results are given of an investigation of the electrical resistance of pulverized titanium slags at a temperature of 25°C. It is established that, with a change in the ferrous oxide content from 15.49 to 2.5%, the specific resistance of the titanium slag with a coarseness of -0.1 millimeters decreased from $3.08 \cdot 10^{-5}$ to $1.41 \cdot 10^{-3}$ ohms/cm, i.e., by a factor of 218. In the authors' opinion, control over reduction electro-smelting of titanium concentrates, which consists of determining ferrous oxide during the course of the process, can be exerted by establishing the electrical resistance of the slags. Two illustrations, one table, and three bibliographic entries.

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USSR

UDC 669.295.112

RASPOPIN, V. G., and DENISOV, S. I.

"Efficient Operating Conditions and Calculating the Parameters of Thermal Ore Furnaces for Smelting Titanium Slags"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 29-33

Translation: Generalized results are presented from research on the selection of efficient electrical conditions for smelting titanium slags and the operation of thermal ore furnaces. On the basis of generalized research results, the dependencies of usable voltage and the diameter of the furnace bath on the transformer capacity supplied are presented. One table and ten bibliographic entries.

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1/2. 024 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--ELECTRICAL CONDUCTIVITY OF MELTS DURING THE REDUCTIVE SMELTING OF
TITANIUM CONCENTRATES -U-
AUTHOR--DENISOV, S.I., DEGTYAREV, V.S., REZNICHENKO, V.A.
COUNTRY ~~OF~~ INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR METAL. 1970, (1), 80-2
DATE PUBLISHED-----70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, MATERIALS
TOPIC TAGS--SLAG, ELECTRICAL CONDUCTIVITY, SMELTING FURNACE, TITANIUM,
TITANIUM OXIDE, MOLTEN METAL

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0540 STEP NO--UR/0370/70/000/001/0080/0082
CIRC ACCESSION NO--AP0105525
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0105525

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. SAMPLES WERE TAKEN FROM THE FURNACE AT DIFFERENT TIMES DURING THE REDUCTIVE SMELTING OF FE-TI CONCS. THE CONTENT OF FEO VARIED FROM 23.9 TO 3.77PERCENT, THAT OF TI SUB2 O SUB3, FROM 0 TO 24-26PERCENT, AND OF TIO, FROM 0 TO 4PERCENT. THE CHANGES IN ELEC. COND. OF TI SLAGS WERE DETD. AS A FUNCTION OF TEMP. AND THE CONTENT OF FEO. DURING THE MELTING PROCESS, THE ELEC. COND. CHANGED FROM 25-30 OHM-CM FOR THE INITIAL MELT TO 150-170 OHM-CM FOR THE SLAG AT THE OUTPUT WITH 4-5PERCENT FEO.

UNCLASSIFIED

1/2. 024 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--ELECTRICAL CONDUCTIVITY OF MELTS DURING THE REDUCTIVE SMELTING OF
TITANIUM CONCENTRATES -U-
AUTHOR--DENISOV, S.I., DEGTYAREV, V.S., REZNICHENKO, V.A. D
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR METAL. 1970, (1), 80-2
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, MATERIALS
TOPIC TAGS--SLAG, ELECTRICAL CONDUCTIVITY, SMELTING FURNACE, TITANIUM,
TITANIUM OXIDE, MOLTEN METAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1988/0540 STEP NO--UR/0370/70/000/001/0090/0082
CIRC ACCESSION NO--AP0105525

UNCLASSIFIED

2/2 024
CIRC ACCESSION NO--AP0105525

UNCLASSIFIED

PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SAMPLES WERE TAKEN FROM THE FURNACE AT DIFFERENT TIMES DURING THE REDUCTIVE SMELTING OF FE-TI CONCS. THE CONTENT OF FEO VARIED FROM 23.9 TO 3.77PERCENT, THAT OF TI SUB2 O SUB3, FROM 0 TO 24-26PERCENT, AND OF TIO, FROM 0 TO 4PERCENT. THE CHANGES IN ELEC. COND. OF TI SLAGS WERE DETD. AS A FUNCTION OF TEMP. AND THE CONTENT OF FEO. DURING THE MELTING PROCESS, THE ELEC. COND. CHANGED FROM 25-30 OHM-CM FOR THE INITIAL MELT TO 150-170 OHM-CM FOR THE SLAG AT THE OUTPUT WITH 4-5PERCENT FEO.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--A STUDY OF THE ELECTRICAL CONDUCTIVITY OF TITANIUM SLAGS -U-
AUTHOR-(03)-DEGTAREV, V.S., REZNICHENKO, V.A., DENISOV, S.I.
COUNTRY OF INFO--USSR
SOURCE--IZVEST. V.U.Z., TSVETNAYA MET., 1970, (1), 43-47
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--SLAG, TITANIUM, ORE BENEFICIATION, BIBLIOGRAPHY, ELECTRIC
CONDUCTIVITY, METAL MELTING, ACTIVATION ENERGY, IRON ORE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/0550 STEP NO--UR/0149/70/000/001/0043/0047
CIRC ACCESSION NO--AP0124245
UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124245

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ELECTRICAL CONDUCTIVITY OF TI SLAGS OBTAINED AT VARIOUS STAGES IN THE ELECTRIC MELTING OF FE, TI CONCENTRATES WAS STUDIED. THE CONDUCTIVITY WAS MAINLY OF AN ELECTRONIC NATURE. THE SPECIFIC ELECTRICAL CONDUCTIVITY AND THE ACTIVATION ENERGY ASSOCIATED THEREWITH DEPENDED BOTH ON THE TOTAL TI CONTENT AND ON THE RATIO OF $Ti_{SUB2} O_{SUB3}$ PLUS TiO TO TiO_{SUB2} . THE CONDUCTIVITY-TEMP. RELATIONSHIPS ARE OF PARTICULAR IMPORTANCE IN DEVELOPING A METHOD OF DIFFERENTIAL MELTING FOR FE, TI CONCENTRATES.

UNCLASSIFIED

USSR

UDC 669.716:621.777.2

BARANCHIKOV, V. M., GLEBOV, Yu. P., GOROKHOV, V. S., DENISOV, S. M.,
ZAKHAROV, M. F., MILORADOVA, O. N., KHARENKO, V. F., and TSAREV, V. I.

"Development and Investigation of the Process of Pressing Rods and Shapes
of Aluminum Alloys with Lubricant Without Press-Residue"

Metallovedeniye Splavov Legkikh Metallov-Sbornik, Moscow, "Nauka", 1970,
pp 129-137, resume

Translation: A number of problems related to the investigation of the process
of pressing aluminum alloys with lubricant and the investigation of mechanical
properties, macrostructure, and geometric dimensions of products are discussed.
Technological-economical data on the process are presented. Five figures, nine
tables, seven bibliographic references.

1/1

USSR

UDC: 621.384.664

GORIN, Yu. P., DENISOV, S. P., MITIN, A. A., STOYANOV, D. A., SYTNIK, V. V.,
Institute of High-Energy Physics, Serpukhov

"A Target for Precise Measurements of the Cross Sections of the Interaction
of Particles With Protons and Deuterons"

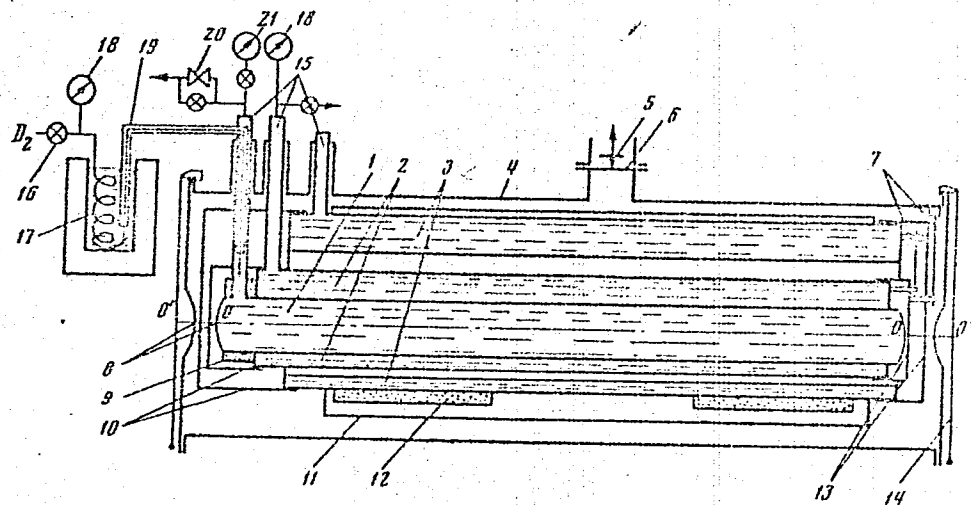
Moscow, Priory i Tekhnika Eksperimenta, No 2, Mar/Apr 72, pp 29-31

Abstract: The paper describes the design and gives the characteristics of a target used for measuring the complete cross sections of interaction of pions, kaons, and protons with protons and deuterons on the accelerator at the Institute of High-Energy Physics in Serpukhov. A diagram of the target is shown in the figure. The target is made entirely of stainless steel, with the exception of the shields and windows. The operating procedure for determining interaction cross sections is described. Measurement errors are analyzed. One figure, bibliography of four titles.

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USER

GORIN, Yu. P. et al., Pribory i Tekhnika Eksperimenta, No 2, 1972, pp 29-31



1--working space, 2--guard space, 3--nitrogen volume, 4--vacuum jacket, 5--knife, 6--diaphragm, 7--cables, 8--mylar windows, 9--zeolite, 10--copper shields, 11, 13--aluminized mylar shields, 12--activated charcoal, 14--plumb line, 15--filler tubes, 16--valve, 17--coil, 18--manometric vacuum meter, 19--siphon, 20--safety valve, 21--reference instrument.

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1/2 030 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--ABSORPTION CROSS SECTIONS OF 25 GEV-C ANTIDEUTERONS IN LI, C, AL,
CU AND PB -U-
AUTHOR-(03)-BINON, F., DENISOV, S.P., DONSKOV, S.V.
COUNTRY OF INFO--USSR
SOURCE--PHYS. LETT.: 31B: 230-2(16 FEB 1970)
DATE PUBLISHED--16FEB70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--CAPTURE CROSS SECTION, ANTIPARTICLE, DEUTERON BOMBARDMENT,
PION, ANTIPROTON, LITHIUM, CARBON, ALUMINUM, COPPER, LEAD
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1982/0678 STEP NO--NE/0000/70/031/000/0230/0232
CIRC ACCESSION NO--AP0052137
UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0052137

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ABSORPTION CROSS SECTIONS WERE MEASURED FOR THE INTERACTION OF ANTIDEUTERONS IN LITHIUM, CARBON, ALUMINUM, COPPER, AND LEAD TARGETS AT 25 GEV-C, USING THE STANDARD TRANSMISSION TECHNIQUE. SIMILAR MEASUREMENTS WERE ALSO MADE FOR PIONS AND ANTIPROTONS. THE COMPARISON OF THE VARIOUS ABSORPTION CROSS SECTIONS SHOWS THAT NUCLEI ARE BLACK FOR BAR P AND BAR D BUT THAT THE VALUES ARE MUCH LARGER FOR BAR D THAN FOR BAR P. FACILITY: INST. FOR HIGH ENERGY PHYSICS, SERPUKHOV, USSR.

UNCLASSIFIED

USSR

UDC 537.533.74

DENISOV, S. S.

"Inelastic Reflection of Electrons from Metals and Elementary Semiconductors for Slant Incidence of the Primary Electron Beam"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 8, 1973, pp 156-157

Abstract: The coefficient of secondary electron emission σ is described as a function of the angle of incidence θ of the primary electrons by the Luk'yanov formula [ZhETF, No 7, 856, 1937]:

$$\ln \sigma \approx B - 2/3 \beta \cos \theta; \quad (1)$$

where B is a constant, $\beta = l_1/l_2$ (the path of the primary electron is l_1 , and the path of the secondary electron is l_2). For the coefficient of inelastic reflection of electrons η expression (1) can be reduced to the form

$$\ln \eta/\eta_0 = 2/3\beta (1 - \cos \theta); \quad (2)$$

where η_0 is the value η for $\theta = 0$, β is the constant for the given material.

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USSR

DENISOV, S. S., Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 8, 1973, pp 156-157

The value of β is determined for the largest possible number of elements, and the relation $\beta(z)$ (z is the atomic number) which is constructed can be used to calculate $\eta(\theta)$, measuring only η_0 . The graphs of $\ln \eta / \eta_0$ ($\cos \theta$), constructed by the published measurements are presented. An analysis of the graphs shows that the derivation of relation (1) for inelastically reflected electrons is inapplicable and relation (2) must be considered as an empirical relation which lacks a theoretical foundation.

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1/2 050 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--DRAG COEFFICIENT IN UNSTEADY FLOWS -U-
AUTHOR--DERISOV, S.V.
COUNTRY OF INFO--USSR *D.*
SOURCE--INZHENERNO-FIZICHESKIY ZHURNAL, 1970, VOL 18, NR 1, PP 118-123
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DRAG COEFFICIENT, FRICTION, FRICTION COEFFICIENT, TURBULENT
FLOW, WATER, FLOW ANALYSIS, MATHEMATIC ANALYSIS, FLOW VELOCITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0542 STEP NO--UR/0170/70/018/001/0118/0123

CIRC ACCESSION NO--AP0121214
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0121214

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FIG. 1. SCHEME OF EXPERIMENTAL INSTALLATION: 1, PUMP; 2, RECEIVER; 3, AIR TANK; 4, CAPILLARY THROTTLE; 5, MIXING CHAMBER; 6, FLOW RATE PROBE; 7, FLOWMETER; 8, WORKING SECTION; 9, PRESSURE DROP METER; 10, THERMOMETER; 11, MEASURING TANK; 12, FEED TANK; 13, MANOMETER; 14, DIFFERENTIAL MANOMETER. FIG. 2. GRAPH OF TIME CHANGE OF VELOCITY w , M-SEC, PRESSURE GRADIENT ΔP - ΔX , BAR-M AND OF REDUCED FRICTION COEFFICIENT λ . FIG. 3. COMPARISON OF EXPERIMENTAL DATA WITH PREDICTED BY FORMULA (9) VALUES OF REDUCED COEFFICIENT OF UNSTEADY FRICTION λ . SUMMARY. IN THE PAPER THE RESULTS OF EXPERIMENTAL STUDY OF THE FRICTION DRAG COEFFICIENT FOR AN ACCELERATED TURBULENT FLOW OF WATER IN A SMOOTH TUBE ARE PRESENTED. THE MEASUREMENTS ARE CARRIED OUT ON A TUBE WITH INNER DIAMETER 10 MM, LENGTH 2.4 M AND WATER FLOW ACCELERATION FROM 8 TO 140 M-SEC PRIME^2 . THE EXPERIMENTAL DATA OF THE COEFFICIENT OF UNSTEADY FRICTION ARE CORRELATED BY EQUATION (9).

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AUTHOR-- DENISOV, V., HEAD OF A CHAIR AT THE KIEV INSTITUTE
FOR ENGINEERS OF CIVIL AVIATION, DOCTOR OF TECHNICAL
SCIENCES, PROFESSOR

NEWSPAPER-- RABOCHAYA GAZETA, JANUARY 30, 1970, P 3, COLS 1-5

ABSTRACT-- THE ARTICLE DISCUSSES THE PROBLEMS OF INFORMATION
COMPATIBILITY AND ENERGONOMICS, THE SCIENCE THAT STUDIES OPERATOR-
MACHINE-MEDIUM SYSTEMS AND URGES THE ESTABLISHMENT OF ERGONOMIC
LABORATORIES IN EVERY INDUSTRY.

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1/2 039 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--A SIGHT SEEING TOUR OF THE SOYUZ SHIP -U-
AUTHOR--DENISOV, V., ALIMOV, V. D
COUNTRY OF INFO--USSR
SOURCE--IZVESTIYA, JUNE 13, 1970, P 3, COLS 1-7
DATE PUBLISHED-----70

SUBJECT AREAS--SPACE TECHNOLOGY
TOPIC TAGS--MANNED SPACECRAFT, SPACE STATION, MANNED ORBITAL
LABORATORY/(U)SOYUZ 9 MANNED SPACECRAFT

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/1182 STEP NO--UR/9003/70/000/000/0003/0003
CIRC ACCESSION NO--AN0104548
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AN0104548

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A VERY GENERAL DESCRIPTION OF THE SOYUZ TYPE SPACE SHIP IS GIVEN. IN SUMMING UP, THE AUTHORS STATE THAT THE FLIGHT OF THE "SOYUZ 9" BRINGS CLOSER THE TIME OF LONG LIFE ORBITAL STATIONS.

UNCLASSIFIED

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USSR

BELONOGOV, G. G., ZINOV'YEV, E. V., DENISOV, V. F.

"Automatic Retrieval of Documents on the Basis of the Text of their Abstracts"

Avtomatika i Vychisl. Tekhn. [Automation and Computer Technology], 1972, No 5, pp 73-79 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V647, by the authors).

Translation: Methods of automatic retrieval of documents on the basis of the texts of their abstracts using associative-address representation in digital computer memory are studied. In the retrieval system suggested, requests are automatically translated from formalized Russian into machine language, and the texts of the abstracts are output as responses to the requests.

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1/2 011 UNCLASSIFIED PROCESSING DATE--020CT70
TITLE--REMOVAL OF DUST FROM MERCURY CONTAINING GASES FROM TUBE FURNACES BY
DRY ELECTROSTATIC PRECIPITATORS -U-
AUTHOR--(04)-SHEBZUKHOV, D.A., DENISOV, V.F., KLEANDROV, T.N., GUDIN, B.S.
COUNTRY OF INFO--USSR
SOURCE--TSVET. METAL. 1970, 43(1), 35-9
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--INDUSTRIAL FURNACE, MERCURY, AIR POLLUTION, ELECTROSTATIC
PRECIPITATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/0749 STEP NO--UR/0136/70/043/001/0035/0039
CIRC ACCESSION NO--AP0107291
UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107291

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE INPRINCIPLE POSSIBILITY OF EMPLOYING AN ELECTROSTATIC PRECIPITATOR FOR REMOVAL OF DUST FORM HG CONTG. GASES FROM TUBE FURNACES IS DEMONSTRATED. THE INSTALLATION OF ELECTROSTATIC PRECIPITATORS MAKES IT POSSIBLE TO REDUCE GREATLY THE VOL. OF REPROCESSED STUPP, AND TO INCREASE THE DIRECT EXTN. OF HG FROM IT. ELECTROSTATIC PRECIPITATORS ALSO HAVE A DEFINITE ECONOMIC ADVANTAGE.

UNCLASSIFIED

USSR

DENISOV, V. G., and ONISHCHENKO, V. F.

Shagi sredi Zveza, (Steps Among the Stars), Moscow, "Znaniye" Publishing House,
1970, 160 pp

Translation:

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CSO: 1840-W

- END -

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DENISOV, V. I.

SPR 59208
6-73

(3)

11-2. METHOD OF DESCRIPTION AND CALCULATION OF THE THERMODYNAMIC EQUILIBRIUM
IN A MULTICOMPONENT SYSTEM WITH CHEMICAL CONVERSION

Article by Ye. M. Buzdun, G. V. Kuznetsov, V. I. Denisov, Novosibirsk:
Novosibirsk, III Sibirskiy po Protsessam Rozra 1, Sibirsk Poluprovodnikoviy
Kristalloy 1, Ilenok, Russia, 12-17 June, 1972, p 12]

An analysis of the mathematical meaning of the De-Donde variables indicates
the possibility of introducing new variables in certain relations analogous to
the De-Donde variables but having significant advantages when describing the
equilibrium in multicomponent systems.

On the basis of using the new variables, a method of calculating the
chemical equilibrium is proposed which combines the universality with a
relatively high computation speed on a computer. Examples are presented of
the thermodynamic calculations of the systems used in the semiconductor layer
growth procedures important in practice.

USSR

UDC 656.25-50

DENISOV, V. I., Chief Engineer of the Gor'kiy Road Computer Center

"Comparison of Data Transmission Systems"

Moscow, Avtomatika, Telemekhanika i Svyaz', No 10, 1971, pp 23-26

Abstract: Data transmission systems are compared as one of the most important problems in constructing a railroad computer center. A study is made of the dependence of the data volumes on the utilization of various service codes. Formulas are derived for the following estimator coefficients: the use coefficient of the constant symbols, the service code coefficient, the model redundancy factor, the informative redundancy factor, the error correction data redundancy factor, and the data recurrence factor in the simulators. Tables of values of the coefficients calculated by the derived formulas are presented both for general calculations and specifically for the Svetofor system. Means of evaluating data transmission systems are discussed. The comparison results show that the application of specialized data transmission equipment is most expedient. If the volume of manual operations with respect to data preparation in the Svetofor system is taken as 100%, then in a system with decision feedback without waiting for the answer it is 105%, and in a system with decision feedback with waiting it is 103%. In the first stage, with insignificant volumes
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USSR

DENISOV, V. I., Avtomatika, Telemekhanika i Svyaz', No 10, 1971, pp 23-26

of problems of improving information reliability solved by the computer center, redundancy by elements can be achieved. Thus, before building a computer center it is expedient to consider the general paths of development of the information and organizational communications on the railroad.

2/2

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USSR

UDC: 621.318.4

YAMNIKOV, Yu. V., DENISOV, V. I.

"Some Problems in Optimum Planning of the Design Parameters of Inductance Coils Using Statistical Experiment Methods"

V sb. Teoriya i praktika ispol'z. sredstv tekhn. kibernetiki. Kn. 1 (Theory and Practice in Using the Facilities of Technical Cybernetics. Book 1-- collection of works), Novosibirsk, 1970(1971), pp 176-182 (from RZh-Radio-tehnika, No 6, Jun 71, Abstract No 6v434)

Translation: The authors discuss the use of the statistical theory of planning of experiments for determining the optimum wire diameter for a coil. The effectiveness of the proposed method of calculation is confirmed by the design of a number of devices. Bibliography of 6 titles. N. S.

1/1

Inorganic Compounds

USSR

UDC 541.127: [546.681'18+546.681'19]

SHURYGIN, P. M., MARBAKH, A. L., DENISOV, V. M., IVANOV, V. V., Krasnoyarsk
Institute of Nonferrous Metals imeni M. I. Kalinin

"Kinetics of Thermal Dissociation of GaP and GaAs Under a Layer of Flux"

Moscow, Doklady Akademii Nauk SSSR, Vol 204, No 6, 21 Jun 72, pp 1419-1421

Abstract: The authors investigated the kinetics of thermal dissociation of gallium phosphide and gallium arsenide under a layer of B_2O_3 doped with Na_2O , SiO_2 and GeO_2 at various pressures of argon. The process of vaporization of the volatile component of the compound -- formation and growth of the gas bubble, its detachment from the molten semiconductor and rise in the flux -- was observed visually and photographically. The rate of dissociation was determined from the number and sizes of bubbles escaping from the interface between phases or from the change in weight of the specimens. The results show that the vaporization of arsenic and phosphorus in the process of dissociation of gallium arsenide and gallium phosphide under molten flux is limited by the processes for formation and growth of bubbles. These processes depend on the external pressure of the inert gas and may be controlled by changing the composition of the flux. The pressure which prevents or

1/2

USSR

SHURYGIN, P. M., et al., Doklady Akademii Nauk SSSR, Vol 204, No 6, 21 Jun 72, pp 1419-1421

strongly suppresses gas release can be lowered considerably by appropriate selection of a flux with high surface tension.

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1/2 006 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--ON THE DETERMINATION OF MEAN SPEED OF WATER FLOW ALONG THE VERTICAL
FROM MEASUREMENTS OF LOCAL SPEEDS AT TWO OR THREE POINTS -U-
AUTHOR--DENISOV, V.M. *D*
COUNTRY OF INFO--USSR
SOURCE--METEOROLOGIYA I GIDROLOGIYA, 1970, NR 2, PP 86-91
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--SPEED INDICATOR, WATER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/0870 STEP NO--UR/0050/70/000/002/0086/0091
CIRC ACCESSION NO--AP0104306
UNCLASSIFIED

2/2 006

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0104306

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD IS SUGGESTED FOR CHECKING THE RELIABILITY OF DETERMINING THE MEAN SPEED OF WATER FLOW ALONG THE VERTICAL FROM DATA OF SIMPLIFIED MEASUREMENTS, AS WELL AS THE CALCULATION OF DISTRIBUTION OF LOCAL SPEEDS OF THE FLOW ALONG THE VERTICAL IN RELATION TO MAXIMUM AND MEAN SPEED.

UNCLASSIFIED

USSR

UDC: 69.058.5

RUPPENYI, K. V., ~~DENISOV, V. N.~~, TARASOVA, I. V., GOLUBEV, A. V., Scientific Research Institute of Foundations and Subterranean Structures

"A Method of Studying Rock Masses and Liners of Subterranean Structures"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki, No 7, Mar 72, Author's Certificate No 329417, Division G, filed 26 Jun 70, published 9 Feb 72, p 163

Translation: This Author's Certificate introduces a method of studying rock masses and liners of subterranean structures by measuring stresses in a drilled shaft. As a distinguishing feature of the patent, accuracy is improved by returning the rock mass to its initial position after measuring the stresses in the drilled shaft, using pickups to register the pressure in the rock mass.

1/1

- 119 -

DENISOV, V. P.

nuclear physics
atomic energy

DENISOV, V. P.



FOURTH UNITED NATIONS
INTERNATIONAL CONFERENCE
ON THE PEACEFUL USES OF ATOMIC ENERGY
Geneva, Switzerland, 6 to 20 October 1971

Translation provided by (source) of the submitting country

ABSTRACT

A/CONF.45/4/3
USSR
January 1972
Op's Ext'n: 11 1/2

1.3

THE DEVELOPMENT OF NUCLEAR POWER-PLANTS WITH
WATER-MODERATED NUCLEAR-POWER REACTORS IN THE
USSR

SOVIET UNION

by V. P. Denisov, G. I. Belyakov, N. A. Kuvshinov, V. V. Bessonov, G. A. Logunov, A. S. Solov'ev, V. K. Tkachenko, I. P. Polozov, M. I. Mityagin, S. A. Shvachkin, A. N. Novikov, V. A. Shcherbina, V. A. Vozhenchik, G. I. Lushin

USSR State Atomic Energy Committee

The experience in operation and development of the new nuclear power plant projects with the water-moderated water-cooled reactors has shown that the possibilities of their improvement are far from being exhausted.

The ways of simplification of and improvements in the individual elements, assemblies, technical and operational solutions are shown in the report for the development of a nuclear power plant with the VVER-1000 reactor.

A special attention is paid to the problems of increasing the equipment reliability and nuclear power plant safety.

In conclusion an attempt is made to generalize the experience gained in projecting and operation of the nuclear power plants with water-moderated water-cooled reactors and the ways of their further improvements.

AM0033534

Dmitriyev, A. Ya.; Denisov, V. P.; Timonin, A. A.; Yermilov, A. A.; Zhelyabin,
B. I.; Grishin, E. Ya.; Mironov, A. V.; Polyakov, V. A.; Leonidov, I. L.

From Space Vehicles to Orbital Stations (Ot kosmicheskikh korablya k orbital'nyim stantsiyam) Moscow. Mashinostroyeniye.

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II	The Program of Piloted Vehicles "Vostok and Voskhod"	11
III	The Program of Piloted Vehicles "Soyuz"	19
IV	Main Flight Stages of the Vehicles "Soyuz"	43
V	The World's First Experimental Cosmic Station and Prospects of Orbital Flights	60

X The book tells of the Soviet program for piloted flights and examines the main stages of development of Soviet Astronautics. Shown are prospects for the development of orbital stations. *208*

19710047 *12*

1/2 018 UNCLASSIFIED PROCESSING DATE—30OCT70
TITLE—INHIBITION OF CUMENE OXIDATION BY A CO DH SUB2 PYCL COMPLEX -U-

AUTHOR—(02)—DENISOV, YE.T., ZUBAREVA, N.G.

COUNTRY OF INFO—USSR

SOURCE—IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 575-80

DATE PUBLISHED—70

SUBJECT AREAS—CHEMISTRY

TOPIC TAGS—CUMENE, CHEMICAL REACTION KINETICS, OXIDATION INHIBITION,
COBALT COMPLEX, PEROXIDE

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--2000/0744

STEP NO--UR/0062/70/000/003/0575/0580

CIRC ACCESSION NO--AP0124414

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124414

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. KINETIC CURVES WERE GIVEN FOR UPTAKE OF O BY CUMENE AT 55DEGREES WITH AND WITHOUT ADDED TITLE COMPLEX I (OH EQUALS DIMETHYLGLYOXIME). KINETIC ANAL. OF THE DATA SHOWED THAT I HAS A HINDERING EFFECT ON THE OXIDN., OWING TO REACTION OF I WITH THE PEROXIDE RADICALS. THE CHAIN TERMINATIONS FOLLOWED BOTH 1ST AND 2ND ORDER KINETICS IN RESPECT TO PEROXIDIC RADICALS. THE RATE CONSTANTS FOR INDIVIDUAL REACTION STEPS WERE CALCD. AND TABULATED FOR TEMPS. FOR 45 TO 55DEGREES. FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--REACTIONS OF ATOMS AND RADICALS WITH ONE ANOTHER IN THE LIQUID
PHASE --U-
AUTHOR--DENISOV, YE.T.
COUNTRY OF INFO--USSR
SOURCE--USP. KHIM. 1970, 39(1), 62-93
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--FREE RADICAL, HYDROXYL RADICAL, PEROXIDE, NITROGEN, TIN, ATOM,
SOLVENT ACTION, THERMODYNAMIC PROPERTY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1984/1695 STEP NO--UR/0074/70/039/001/0062/0093
CIRC ACCESSION NO--AP0100292
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0100292

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW WITH 165 REFS. THROUGH 1968, DEALING WITH RECOMBINATION OF FREE RADICALS IN SOLN., DISPROPORTIONATION AND RECOMBINATION REACTIONS OF ALKYL FREE RADICALS, REACTIONS OF RO AND HO RADICALS, REACTIONS OF PEROXIDE RADICALS AND THOSE WITH THE ODD ELECTRON ON N OR SN ATOMS, EFFECTS OF SOLVENTS ON RADICAL REACTIONS, AND THE INFLUENCE OF VISCOSITY ON THESE. RATE CONST. DATA ARE TABULATED FOR NUMEROUS REACTIONS, ALONG WITH PERTINENT THERMODYNAMIC DATA.

UNCLASSIFIED

1/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--KINETICS AND MECHANISM OF METHYL ETHYL KETONE OXIDATION IN THE
PRESENCE OF COMPLEXES OF IRON,III, AND 9-PHENANTHROLINE -U-
AUTHOR-(02)-KOMISSAROV, V.D., DENISOV, YE.T.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44 (2), 390-5

DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL KINETICS, METHYL ETHYL KETONE, CATALYTIC OXIDATION,
CHEMICAL REACTION MECHANISM, IRON COMPOUND, COMPLEX COMPOUND, CATALYST
REGENERATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--2000/0891

STEP NO--UR/0076/70/044/002/0390/0395

CIRC ACCESSION NO--AP0124554

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE—30OCT70

CIRC ACCESSIGN NO—AP0124554

ABSTRACT/EXTRACT—(U) GP-0- ABSTRACT. KINETIC DATA ON THE OXIDN. OF ACET
IN AQ. SOLN. BY MOL. O CATALYZED BY $Fe(III)$, O, PHENANTHROLINE COMPLEXES
(I). INDICATE THAT THE MECHANISM INVOLVES OXIDN. OF $MeCH:C(OH)Me$ BY I TO
 $MeC:C(O)Me$, WHICH DECOMP. TO $MeCH$ TIMES AC, WHICH REACTS WITH O TO
FORM $MeCH(OOH)AC$, WHICH DECOMP. BOTH TO FREE RADICALS THAT ACCELERATE
THE OXIDN. NAD TO THE OXIDN. PRODUCTS ACH AND $ACOH$. THE OVERALL RATE
DEPENDS ON PH AND O PRESSURE. THE AMT. OF $Fe(III)$ THAT IS REDUCED
LEVELS OFF AT 60PERCENT DURING THE OXIDN., INDICATING REGENREATION.
FACILITY: FILIAL INST. KHIM. FIZ., CHERNOGOLOVKA, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--INHIBITION OF THE INITIATED OXIDATION OF CUMENE BY MOLECULAR IODINE
-U-

AUTHOR--(03)-ALEKSANDROV, A.L., SAPACHEVA, T.I., DENISOV, YE.T.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(4), 1122-4

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--OXIDATION INHIBITION, CUMENE, IODINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/0793

STEP NO--UR/0076/70/044/004/1122/1124

CIRC ACCESSION NO--AP0136227

UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136227

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RATE OF THE MOL. IODINE INHIBITED OXIDN. OF CUMENE (RH) INITIATED BY AZODIISOBUTYRONITRILE (I) INCREASES LINEARLY WITH O PARTIAL PRESSURE. THUS, THE CHAIN BREAKING IS DUE TO THE REACTION OF IODINE WITH R (AND NOT RO SUB2) RADICALS. THE RATIO OF REACTION RATE CONSTS. $K(R + I_{SUB2})$ OVER $K(R + O_{SUB2})$ APPROXIMATELY EQUAL TO 0.45 AT 75DEGREES. IODINE IS REGENERATED FROM THE INTERMEDIATE RI MAINLY BY PEROXY RADICALS AND ALSO BY O. FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 620.178.169.05

PEREL'MAN, R. G., and DENISOV, YU. D., Moscow Aviation Institute

"Installation for Accelerated Tests for Resistance to Erosion"

Moscow, Zavodskaya Laboratoriya, No 4, 1973, pp 472-473

Abstract: An erosion testing installation is described in which specimens, rotating in a vacuum chamber and colliding with dispersion drops ($d=0.3-1.2$ mm) from a drop generator, erode in a medium of saturated steam. As the rotating velocity of specimens is two orders higher than the vertical motion speed of the drops, the collision takes place practically at right angles. At $v=300$ m/sec rotation velocity, 1-mm drops produce at 1.6 mm wide and ~ 10 mm high erosion zone. Materials of Kh18N9T, 2Kh13, or 15Kh12VMF types begin to wear out after 15-20 min at $v=500$ m/sec and $d=1$ mm. Characteristic dependences of erosion wear, determined from weighing the specimens and microscopically investigating their caverns, are shown. Three figures, one table.

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USSR

UDC: 621.44

PEREL'MAN, R. G., Candidate of Technical Sciences, Docent, BAULIN, V. I., Assistant
and DENISOV, YU. D., Graduate Student

"The Role of Dynamic Stresses During Droplet Impact Erosion"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 5, 1973,
pp 64-70

Abstract: The authors study the basic regularities associated with the droplet impact erosion of the blades of wet-steam turbines during the period of discovered damage on the basis of analyzing the dynamic stresses in an elastic half-space during its collision with a droplet. The authors conclude that the cyclic effect of Rayleigh surface waves during this period represent the main damage factor. Experimental data are given which support the validity of the new droplet impact erosion model. This article was presented for publication by Professor G.S. Skubachevskiy of the Moscow Aviation Institute.

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1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--A DISCOVERY MADE BY A SOVIET PHYSICIST -U-
AUTHOR--DENISYUK, YU.N. D
CCUNTRY OF INFO--USSR
SOURCE--PRAVDA, AUGUST 1, 1970, P 2, COL 8
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS
TOPIC TAGS--HCLCGRAM, PHYSICS PERSONNEL

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/0903 STEP NO--UR/9012/70/000/000/0002/0002
CIRC ACCESSION NO--AN0122947
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AN0122947

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BASIC RESEARCH INTO THE METHODS OF MAKING AND REPRODUCING HOLOGRAMS, CONDUCTED BY YU. N. DENISYUK, HAS BEEN CONSIDERED BY THE COMMITTEE FOR INVENTIONS AND DISCOVERIES AND ACKNOWLEDGED AS THE OUTSTANDING DISCOVERY OF MODERN PHYSICS.

UNCLASSIFIED

1/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--INFLUENCE OF THE STRUCTURE OF THE TRANSVERSE MODES OF A RADIATION
SOURCE ON THE HOLOGRAM GENERATED IMAGE -U-
AUTHOR-(02)-STASELKO, D.I., DENISYUK, YU.N.
COUNTRY OF INFO--USSR
SOURCE--OPTIKA I SPEKTROSKOPIIA, VOL. 28, FEB. 1970, P. 232-330
DATE PUBLISHED----FEB70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--HOLOGRAM, RADIATION SOURCE, PULSE LASER, RUBY LASER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1483 STEP NO--UR/0051/70/028/000/0323/0330
CIRC ACCESSION NO--AP0112477
UNCLASSIFIED

2/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0112477
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DERIVATION OF AN EXPRESSION
DESCRIBING THE BRIGHTNESS DISTRIBUTION IN A HOLOGRAM GENERATED IMAGE FOR
A LASER EMITTING A SET OF LONGITUDINAL AND TRANSVERSE MODES DURING A
LIMITED PERIOD OF TIME. IT IS SHOWN THAT WHEN VIEWING THROUGH SMALL
SEGMENTS OF THE HOLOGRAM, THE APPARENT BRIGHTNESS OF THE IMAGE IS
MODULATED BY THE SQUARE OF THE TEMPORAL SPATIAL COHERENCE MODULUS OF THE
SOURCE. THIS PHENOMENON IS APPLIED TO THE EXPERIMENTAL INVESTIGATION OF
THE SPATIAL COHERENCE OF A PULSED RUBY LASER.

UNCLASSIFIED

1/2 049 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--STUDIES ON THE EFFECTS OF THE SPACE SOLAR RADIATION ON SPACECRAFT
MATERIALS AND COATINGS -U-
AUTHOR--(02)-KOSELKIN, V.V., DENISOV, Y.N.
COUNTRY OF INFO--USSR
SOURCE--FOURTH CRANFIELD FLUIDICS CONFERENCE 17TH-20TH MARCH 1970.
COVENTRY.
DATE PUBLISHED----MAR70
SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS, MATERIALS, SPACE TECHNOLOGY
TOPIC TAGS--SOLAR RADIATION, PROTECTIVE COATING, SPACE RADIATION,
AEROSPACE MATERIAL, SPECTRUM, MATERIAL DEGRADATION, SPACECRAFT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1105 STEP NO--UK/0000/70/000/000/0000/0000
CIRC ACCESSION NO--AT0134864
UNCLASSIFIED-

2/2 049

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0134864

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A SHORT WAVE PART OF THE SOLAR RADIATION IN SPACE MAY CAUSE DEGRADATION AND CHANGES OF PROPERTIES OF OPTICAL MATERIALS, THERMAL CONTROL COATINGS AND SOME ORGANIC MATERIALS. THE FLIGHT TEST OF PASSIVE THERMAL CONTROL COATINGS ABOARD "KOSMOS" SATELLITES HAVE SHOWN THAT SOLAR ABSORPTANCE OF SOME COATINGS MAY BE INCREASED BY 2-2.5 TIMES DUE TO SPACE RADIATION. A NUMBER OF SOURCES USED FOR THE SIMULATION OF NEAR AND VACUUM ULTRAVIOLET REGIONS OF THE SPACE SOLAR RADIATION IS INVESTIGATED. RECOMMENDATIONS ARE SUGGESTED FOR CHOOSING A SOURCE WITH REQUIRED ENERGY AND SPECTRUM PERFORMANCE, WHICH ENABLES TO SIMULATE THE EFFECT OF THE SPACE SOLAR RADIATION ON MATERIALS. THE DEPENDANCE OF THE EXPERIMENTAL RESULTS ON A SPECTRUM COMPOSITION OF THE RADIATION AND ON TEST CONDITIONS IS SHOWN THROUGH OBTAINED DATA OF DIFFERENT MATERIALS TESTS. PRINCIPAL RECOMMENDATIONS ON TEST METHODS OF THE SPACE SOLAR RADIATION EFFECT ON MATERIALS ARE GIVEN. THE POSSIBILITIES OF ACCELERATED TESTS OF MATERIALS FOR LONG DURATION SPACE MISSIONS ARE DISCUSSED.

UNCLASSIFIED

USSR

UDC: 621.396.69:621.319.4

DENISOV, Yu. P.

"A Semiautomatic Machine for Painting and Drying KD-2a Capacitors"

Elektron. tekhnika. Nauchno-tekhn. sb. Tekhnol. i organiz. proiz-va (Electronic Technology. Scientific and Technical Collection. Technology and Organization of Production), 1970, vyp. 4 (36), pp 129-132 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1V285)

Translation: The author describes a semiautomatic device for painting and drying ceramic disc capacitors. The machine produces high-quality coatings. The module for application of the coating is a vat with tracks for the capacitor leads and a pouring tube mounted above the vat. In applying the coating, the capacitor discs are partially immersed in the vat, and then the same paint material is poured over them from above. Radiant heat is used for drying. N. S.

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USSR

UDC 621.396.69:621.319.4(088.8)

D
DENISOV, YU. P.

"A Device for Orienting and Loading Disc Capacitors"

USSR Author's Certificate No 235854, Filed 6 Jun 67, Published 5 Jun 69 (from
RZh-Radiotekhnika, No 6, Jun 70, Abstract No 6V371P)

Translation: The patented device contains a conveyer and an orientation mechanism which is distinguished by the fact that the primary orientation unit is made in the form of two movable flat springs which are suspended on columns and located one behind the other. The orientation mechanism also contains a unit for checking orientation accuracy, and a secondary capacitor orientation unit equipped with a mechanism for turning the capacitors through 180°. The design of the modules in the device is described. Seven illustrations. Ye. M.

1/1

USSR

UDC 539.3:4

VOLKOV, S. D., GIRS, V. N., DENISOV, Yu. V., KLINSKIKH, N. A.,
and KOMISSAROVA, M. L., Sverdlovsk, Ural Polytechnic Institute
imeni S. M. Kirov

"On Methods of Solving Problems of Thermoelasticity"

Kiev, Problemy Prochnosti, No 5, May 73, pp 3-8

Abstract: The previously by one of the authors suggested new method of applying Green's functions of Laplace equation for derivation of universal algorithms for isothermic problems, which was propagated to problems of thermoelasticity (Ibid.; Volkov, S. D., et al., No 2, 1972), presented the solution by a series of quadratures the convergence of which was demonstrated on an example with already known solution. Some results of a further development of this method are reported. It is demonstrated that by known Green's function of Laplace equation of a given domain, the reduction to a series of quadratures can be applied to the solution of a disconnected boundary problem of

1/2

USSR

VOLKOV, S. D., et al., Problemy Prochnosti, No 5, May 73, pp 3-8

thermoelasticity of homogeneous isotropic bodies. General conditions of the uniform convergence of this series are determined. The distribution of stresses in an infinite circular cylinder loaded with radial forces in an asymmetric and non-standard temperature field was determined. Twenty six formulas, four bibliographic references.

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- 101 -

USSR

UDC 648.7:599.323.4

SMIRNOV, A. A., IOBACHEV, V. S., and DENISOVA, A. V., Chair of Vertebrate Zoology, Moscow State University imeni M. V. Lomonosov, Moscow

"Effect on the Reproductive Capacity of Great Gerbils of Treatment of Plants in Their Settlements With Sevin"

Moscow, Nauchnyye Doklady Vysshey Shkoly, Biologicheskiye Nauki, No 3, 1971, pp 29-33

Abstract: In an area 100 km east of the city of Aral'sk, plants in great gerbil (*Rhombomys opimus* Licht.) settlements were sprayed with sevin in the amount of 0.5 g/m². The consumption of plant feed containing sevin, which was preserved for long periods of time in the animals' feed storage chambers, reduced the total number of embryos increased the number of resorbed embryos, and delayed fertilization of females as well as the time of exit of young animals from the burrows, so that the young animals lacked fresh plant food, which was no longer available during the hot weather. When the settlement area was treated with sevin, the number of animals in the settlements was reduced by a factor close to two and the number of inhabited settlements decreased. Introduction of sevin into the burrows of the great gerbil in large doses may be a method of controlling these animals in plague foci that

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USSR

SMIRNOV, A. A., et al., Nauchnyye Doklady Vysshey Shkoly, Biologicheskiye Nauki, No 3, 1971, pp 29-33

is preferable to dusting of the burrows with DDT combined with spreading bait poisoned with zinc phosphide on the surface, these methods are being used now. The delayed action of sevin as compared with that of zinc phosphide is of advantage, because sevin is spread by the animals throughout the burrows. Sevin would exert its effect in the burrows in locations in which the fleas hatch and concentrate.

2/2

- 59 -

Acc. Nr: **AP0051942**

Ref. Code: **UR0219**

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol **69**, Nr **2**, pp **9-12**

SIGNIFICANCE OF CHOLINERGIC MEDIATION IN THE CENTRAL REGULATION
OF RESPIRATION

G. A. Denisova

Acad. I. P. Pavlov I Leningrad Medical Institute

A dissimilar sensitivity of individual "respiratory zones" to metamisyl — a central anticholinergic agent — was evinced in local stimulation of various structures of the medulla oblongata and in registration of response respiratory reactions. It is pointed out that under the effect of metamisyl maximum ex- and inspiratory shifts occur without any substantial variations of the background respiration. These facts bear witness to a difference in the neurochemical organization of central mechanisms of respiratory regulation and to the dissimilar degree to which cholinergic mediation participates in these processes. There exists a definite independence of mechanisms associated with regulation of the initial respiration level and with the emergence of abrupt expiratory and inspiratory shifts.

REEL/FRA
19820425

2 kc

USSR

UDC: 669.2:536.24

RAFALOVICH, I. M. and DEMISOVA, I. A.

Determination of the Thermal Properties of Metallurgical Materials
(Opredeleniye teplofizicheskikh svoystv metallurgicheskikh materialov),
Moscow, "Metallurgiya" Press, 1971, 160 p., 76 illustrations, 55 tables,
144 bibliographic references.

This second and revised edition outlines newly developed techniques, procedures and set-ups making it possible to determine the thermal properties of ordinary and composite materials as well as the viscosity of melts. Cited for the first time are data on the thermophysical properties of various nonferrous and rare metals determined by the new techniques at different production stages. The proposed procedures and equipment designs feature simplicity and an accuracy sufficient for engineering calculations. The book is intended for engineers and technicians (metallurgists, heat engineers, physicists and chemists) associated with research laboratories of plants and institutes as well as for students in related disciplines and specialties.

1/2

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USSR

RAFALOVICH, I. M., and DENISOVA, I. A., Determination of the Thermal Properties of Metallurgical Materials, Moscow, "Metallurgiya" Press, 1971, 160 p

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2/2

USSR

UDC 669-157:669.15-194.56

GOL'DSHTEYN, M. I., DENISOVA, I. K., ZAKHAROV, V. N., and
KOPYLOVA, V. A., Ural Polytechnic Institute imeni S. M. Kirov

"Change of the Fine Structure of Heat-Resistant Austenitic
Steel During Aging"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 36, No 4,
Oct 73, pp 742-746

Abstract: An experimental study was made of fine structure
changes of three melts (1 - containing Mo, V, and Nb,
2 - not containing Mo and Nb, and 3 - not containing Mo, V,
and Nb) of EI481 austenitic heat-resistant steel in the pro-
cess of aging. The results are discussed by reference to dia-
grams showing the changes in width of the interferential line
(311) α_1 of the austenite, the blocks and microdistortions, the
density of dislocations, and of the lattice parameter. The fine
austenitic structure of steel alloyed with Mo, V, and Nb (melt 1)

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USSR

GOL'DSHTEYN, M. I., et al., Fizika Metallov i Metallovedeniye, Vol 36, No 4, Oct 73, pp 742-746

and alloyed with only V (melt 2) were found to undergo considerable changes during aging; a crushing of blocks and a growing of microdistortions and of the density of dislocations take place. These changes in the structure of the matrix are accompanied by a considerable enlargement of interferential lines and by a change of the lattice parameter. The discussed changes of the fine structure of the matrix together with the influence of the very dispersion particles result in a considerable strengthening of steel in the process of dispersion hardening. Five figures, one table, ten bibliographic references.

2/2

USSR

UDC 612.833.81

D
DENISOVA, I. M., and KOSILOV, S. A., Institute of Developmental Physiology and Physical Training, Academy of Pedagogical Sciences USSR

"Formation and Improvement of Purposeful Precise Movements in Animals"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti, No 1, 1970, pp 73-84

Abstract: Dogs were taught to press their right front paw on a lever that moved a bowl of food enclosed in a transparent box. With the right amount of pressure on the lever, the bowl coincided with an opening in the top of the box, and the animal was able to get the food. If the pressure was too light, the bowl failed to reach the opening; if too heavy, it passed by the opening and the animal did not get the food. Precision increased with training. The number and duration of searching movements steadily decreased until the bowl retrieved in a single step. Even when the weights attached to the lever were changed, the precision of the movements remained high, because of the increased intensity of search.
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USSR

DENISOVA, I. M., et al., Moscow, Zhurnal Vysshey Nervnoy Deyatel'-nosti, No 1, 1970, pp 73-84

This was achieved not by a lengthening of the period of analysis, but by an increase in the number of stages in the search.

2/2

- 84 -

1/2 015 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--FORMATION AND PERFECTION OF PURPOSEFUL PRECISE MOVEMENTS IN ANIMALS
-U-
AUTHOR--DENISOVA, I.M., KOSILOV, S.A.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 1, PP
78-84
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DOG, CONDITIONED REFLEX
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1982/0791 STEP NO--UR/0247/70/020/001/0078/0084
CIRC ACCESSION NO--AP0052229
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0052229

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DOGS WERE TRAINED TO PRESS PRECISELY A LEVER WITH THE LEG. UPON A CERTAIN EFFORT AND AMPLITUDE OF PRESSURE, THE BOWL WITH FOOD COINCIDED WITH THE OPENING IN THE TRANSPARENT JACKET, AND THE DOG RECEIVED THE FOOD. AS TRAINING WENT ON, THE PRECISION OF PRESSURE IMPROVED. AT THE INITIAL STAGE THE NUMBER AND DURATION OF SEARCH STOPPAGES INCREASED AS THE PRESET HEIGHT OF THE BOWL LIFTING WAS BEING APPROACHED. THIS TESTIFIED TO THE PARTICIPATION OF THE ANALYSIS OF KINESTHETIC STIMULI. THEN, AS THE MAXIMUM OF THE PARAMETERS WAS ACHIEVED, THE SEARCH STOPPAGES BEGAN TO DECREASE (WINDING UP THE SEARCH) AND THE MOVEMENTS BECAME SINGLE STAGED, I. E. THE KINESTHETIC ANALYSIS CEASED. IN A SINGLE EXPERIMENT, WHEN THE REQUIRED PRESSURE AMPLITUDE REMAINED CONSTANT, WHILE THE EFFORTS FOR ITS ACHIEVEMENT CHANGED, THE ACCURACY OF THE MOVEMENT REMAINED HIGH DUE TO A CONSIDERABLE INCREASE IN THE SEARCH.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--THERMAL HARDENING OF COMPOSITIONS CONTAINING
POLY(METHYLPHONYLSILOXANE) AND FINELY DISPERSED LAMINATED SILICATES -U-
AUTHOR-(05)-DENISOVA, N.A., KROTIKOV, V.A., KHARITONOV, N.P., FILINA,
L.V., NEFEDOV, V.D.
COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 362-7

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--HARDNESS, SILOXANE, LAMINATED PLASTIC, TALC, ASBESTOS,
ALCOHOL, POLYMER CROSSLINKING, THERMAL EFFECT, BUTANOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0623

STEP NO--UR/0363/70/005/002/0362/0367

CIRC ACCESSION NO--AP0119535

UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119535

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ORG. SILICATE COMPN. CONTG. POLY(METHYLPHENYLSILOXANE) (I) WERE HARDENED IN THE PRESENCE OF FINELY DIVIDED MUSCOVITE, TALC, ASBESTOS, AND MONTMORILLONITE (WHICH HAD BEEN TREATED WITH BOILING BUOH, OCTANOL, OR DECANOL AT 180-300DEGREES). DTA INDICATED THAT THE HYDROXYLATED SURFACE OF THE LAMINATED SILICATES REACTED WITH ALCS. ONLY AT LARGER THAN OR EQUAL TO 200-300DEGREES. THUS, THE SIOH GROUPS PARTICIPATED IN CONDENSATIONS OCCURRING DURING THE HARDENING OF I. THERMAL HARDENING OF I WITHOUT LAMINATED SILICATES PROCEEDED WELL ONLY AT LARGER THAN OR EQUALS TO 200-300DEGREES. THE THERMAL HARDENING OF I WAS ACCOMPANIED BY EVOLUTION OF GASEOUS PHME, C SUB6 H SUB6, AND CO SUB2. A CROSSLINKING MECHANISM FOR THE HARDENING OF I WAS PROPOSED. FACILITY: INST. KHIM. SILIKAT. IM. GREBENSHCHIKOVA, LENINGRAD, USSR.

UNCLASSIFIED

Adsorption

USSR

UDC: 621.9-496:532.546:546.284

KROTIKOV, V. A., TIKHOMOLOVA, K. P., KHARITONOV, N. P., and DENISOVA, N. A.,
Institute of Chemistry of Silicates imeni I. V. Grebenshchikov, Leningrad, Academy
of Sciences USSR, and Leningrad State University imeni A. A. Zhdanov, Leningrad,
Ministry of Higher and Secondary Specialized Education RSFSR

"Preparation of Rigid, Chemically Resistant Porous Bodies on the Basis of the Sys-
tem Polyorganosiloxane-Quartz"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70, pp 1229-1234

Abstract: Rigid, chemically inert diaphragms are essential for the study of
phenomena involving liquid flow through fine pores. The material of the diaphragms
must be rigid to preclude displacement of parts of the diaphragm under the effect
of liquid flow. Cylindrical diaphragms that fulfill this condition were prepared
from quartz powder and organosilicon lacquer KO-815 (GOST 11066-64). Quartz powder
with particle diameters of 16-44, 44-52, or 52-75 μ was combined with the polyor-
ganosiloxane in a ratio of 9:1 by weight, using a toluene solution of the polymer.
On evaporation of the toluene, the mixture was subjected to cold pressing in a mold
(2000 kg/cm² for 10 min for a cylinder with a diameter of 30 mm and height of
90-120 mm). The diaphragm was then kept at 280° for 3 hrs and calcined at 550° for

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USSR

KROTIKOV, V. A., et al, Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70, pp 1229-1234

24-72 hrs. KO-815 (polyphenylsiloxane with a branched structure) decomposed during the thermal treatment, forming SiO_2 that cemented together the quartz. The total porosity of the diaphragms was 20-30%. The mean pore radius, which increased with the quartz particle size and with the length of the time of calcination, ranged from 2.7 μ (quartz particle size 16-44 μ , 48 hrs at 550°) to 6.1 μ (quartz particle size 52-75 μ , 72 hrs at 550°). The diaphragms were chemically stable to prolonged boiling in 0.01 N solutions of KCl and HCl. Comparison of the electrokinetic characteristics (zeta potential and the coefficient of effectiveness α in KCl solutions) of the diaphragms and powdered quartz showed that SiO_2 derived from KO-815 covered the quartz particles in the form of a dense layer and that the surface of this layer had a structure different from that of quartz.

2/2

USSR

UDC 546.77'183:661.183.9

VINMER, I. K., VOICHINOVA, E. S., DENISOVA, N. E.

"Ion-Exchange Properties of Zirconium 'Molybdophosphates' (ZMP) "

Leningrad, Russian, Zhurnal prikladnoi khimii, vol 46, No 7, July 73,
pp 1471-1475

Abstract: Studies on the ion-exchange properties of ZMP as a function of the method of preparation showed that ZMP prepared at pH 3 was smaller in volume and had smaller pores than samples prepared at lower pHs (0.50-1.65). In the presence of heteropoly acid, ions that form slightly soluble molybdates were sorbed partially by a precipitation mechanism. But in the presence of phosphomolybdic heteropoly acid, sorption was chiefly by ion exchange. When the ZMP product was dried at temperatures higher than 150°C, the ion-exchange volume decreased markedly compared to that dried at lower temperatures. Above 400°C, there was a condensation of the phosphoric acid groups.

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1/2 039 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--MATERIALS ON PHYSICO CHEMICAL CHARACTERISTICS OF THE PREPARATIONS
OF CRUDE AND PURIFIED -U-
AUTHOR-(02)-DENISOVA, N.P., SHAPIRO, N.I.
COUNTRY OF INFO--USSR D
SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 4,
PP 72-77
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ELECTROPHORESIS, DYSENTERY, CHROMATOGRAPHY, UV SPECTRUM, IR
SPECTRUM, SKIN TEST, DIAGNOSTIC METHODS, ANTIGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1938/1674 STEP NO--UP/0016/70/000/004/0072/0077

CIRC ACCESSION NO--AP0106420
UNCLASSIFIED

2/2 039

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106420

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A COMPARATIVE STUDY WAS MADE OF THE ELECTROPHORETIC PROPERTIES, DISTRIBUTIVE CHROMATOGRAPHY, COLUMN MOLECULAR CHROMATOGRAPHY AND OPTIC PROPERTIES (UV SPECTRA, INFRARED SPECTRA, DISPERSION AND OPTIC ROTATION) OF THE PREPARATIONS OF CRUDE AND PURIFIED DYSENTERIN USED FOR SKIN TESTS IN DIAGNOSIS OF DYSENTERY. PURIFIED DYSENTERIN WAS PURELY PROTEIN, AND HOMOGENEOUS IN SIZE (MOLECULAR WEIGHT ABOUT 12,000). A MARKED POLYDISPERSITY AND THE PRESENCE OF ADMIXTURES OF COMPONENTS OF NUCLEAR NATURE AND DERIVATIVES OF A COMPLEX ANTIGEN WERE REVEALED IN PREPARATIONS OF CRUDE DYSENTERIN.

UNCLASSIFIED

1/2 024 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--THE PRESENCE OF COMMON PEPTIDE FRAGMENTS IN THE PROTEIN ALLERGENS
OF ENTEROBACTERIA -U-
AUTHOR--(02)-SHAPIRO, N.I., DENISOVA, N.P. D
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 3,
PP 77-80
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ESCHERICHIA COLI, PARATYPHOID FEVER, TYPHOID FEVER, VACCINE,
DYSENTERY, PEPTIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/1489 STEP NO--UR/0016/70/000/003/0077/0080
CIRC ACCESSION NO--AP0109549
UNCLASSIFIED

2/2 024

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0109549

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS EXAMINED THE PROTEIN ALLERGENS ISOLATED FROM THE STRAINS OF A NUMBER OF REPRESENTATIVES OF INTESTINAL FAMILY, DYSENTERY FLEXNER 26, E. COLI OIII, TYPHOID NO. 1203 AND PARATYPHOID B NO. 50602 BY MODIFIED TSUVERKALOV'S METHOD. THE PREPARATIONS WERE SUBJECTED TO ENZYMATIC SPLITTING WITH CRYSTALLINE TRYPSIN, AND PEPTIDE MAPS OF HYDROLYZATES WERE OBTAINED BY THE FINGER PRINT METHOD. THE PROTEIN ALLERGENS UNDER STUDY CONTAINED IN THEIR PRIMARY STRUCTURE FRAGMENTS, COMMON BY PEPTIDE COMPOSITION. THIS CIRCUMSTANCE WAS A POSSIBLE CAUSE OF CROSS REACTIONS SEEN IN ADMINISTRATION OF HETEROLOGOUS ALLERGENS TO ANIMALS SENSITIZED WITH DYSENTERY VACCINE.

UNCLASSIFIED

USSR

UDC 669.295.053.24

DEGTYAREV, V. S., DENISOV, S. I., DENISOVA, N. V., KIPRICH, N. A., AND GOBOV, A. P.

"Testing the Process of Melting of Titanium Slags on the Basis of Changing Electrical Resistance"

Sb. tr. Vses. n.-i. i proyekt. in-t titana [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 27-29, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. 1G188 by the authors).

Translation: Results are presented from a study of the electrical resistance of granulated Ti slags as a function of various factors at 25°. As the content of FeO changes from 15.49 to 2.5%, the resistivity of Ti slag with a grain size of less than 0.1 mm decreases from $3.08 \cdot 10^{-5}$ to $1.41 \cdot 10^{-3}$ ohm·cm, i.e., by 218 times. Testing of the reduction electric melting of Ti concentrates, consisting of determination of FeO during the course of the process, can be performed by determining the electrical resistance of the slags. 2 figures; 1 table.

1/1

USSR

UDC 669.259-04

DEGTYAREV, V. S., DENISOV, S. I., DENISOVA, N. V., KIPRICH, N. A., and GOBOV, A. P.

"On Controlling the Process of Smelting Titanium Slags by Change in Electric Conductivity"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 27-29

Translation: Results are given of an investigation of the electrical resistance of pulverized titanium slags at a temperature of 25°C. It is established that, with a change in the ferrous oxide content from 15.49 to 2.5%, the specific resistance of the titanium slag with a coarseness of -0.1 millimeters decreased from $3.08 \cdot 10^{-5}$ to $1.41 \cdot 10^{-3}$ ohms/cm, i.e., by a factor of 218. In the authors' opinion, control over reduction electro-smelting of titanium concentrates, which consists of determining ferrous oxide during the course of the process, can be exerted by establishing the electrical resistance of the slags. Two illustrations, one table, and three bibliographic entries.

1/1

USSR

UDC 661.183.9 : 546.831'776'185

VINTER, I. K., BOYCHINOVA, YE. S., and DENISOVA, N. YE.

"Effect of Synthesis Conditions on Ion-Exchange Properties of Zirconium 'Molybdophosphates'"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, No 8, Aug 70, pp 1678-1682

Abstract: The article describes results of a study of the ion-exchange properties of zirconium "molybdophosphates" as affected by (1) the anion : zirconium ratio $[(\text{Mo} + \text{P}) : \text{Zr}]$ in the initial solutions with a constant Mo : P ratio, (2) the Mo : P ratio with a constant $(\text{Mo} + \text{P}) : \text{Zr}$ ratio in the initial solution, (3) the pH value of the precipitation. It was found that the static exchange capacity of the specimens increases with an increase in the $(\text{Mo} + \text{P}) : \text{Zr}$ ratio. The optimal static exchange capacity is found in specimens with the $(\text{Mo} + \text{P}) : \text{Zr}$ ratio in the initial solution equal to 10 : 1. Given a constant $(\text{Mo} + \text{P}) : \text{Zr}$ ratio, the capacity drops with an increase in the molybdate and a decrease in the phosphate. The optimal conditions

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USSR

VINTER, I. K., et al., Zhurnal Prikladnoy Khimii, Vol 43, No 8, Aug 70, pp 1678-1682

for obtaining granulated zirconium "molybdophosphate" specimens are Mo : P : Zr ratios in the initial solutions of 6 : 4 : 1 and 7 : 3 : 1 and pH values at the end of precipitation of 1.65 and 3.70 respectively.

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- 22 -

USSR

UDC 620.193.41

DENISOVA, V. G., Kievenergo

"Influence of Arsenic in Carbon Steels on Corrosion Rate in Solutions of Sulfuric Acid"

Moscow, Zashchita Metallov, Vol 7, No 2, Mar-Apr 71, pp 169-170

Abstract: The author studied the influence of arsenic content in carbon steels, temperature, and concentration of sulfuric acid on corrosion rate. The rate of dissolution of carbon steels in dilute sulfuric acid increases with increase in carbon content. The arsenic changes this somewhat. An arsenic content of 0.14% increases the rate of corrosion of steels with up to 0.5% carbon, while increasing the arsenic content to 0.3-0.7% decreases the corrosion rate. With a carbon content of 0.75%, 0.14% arsenic sharply inhibits corrosion. Further increases in arsenic content have almost no influence with this carbon content.

1/1

USSR

UDC 546.26.546.45:543.226

YEVSEYEVA, T. I., CHERSTVENKOVA, YE. P., NIKOL'SKIY, V. A., and DENISOVA, V.I.

"Determination of Free Carbon In Metallic Beryllium"

Moscow, Zavodskaya Laboratoriya, No 4, 1973, pp 397-400

Abstract: A thermogravimetric study was made of the rate of burn out of metallic beryllium and its carbide. The analysis was done in air on a thermobalance with continuous weighing with slow warm-up of the furnace up to 1120° C. The beryllium carbide produced by caking of metal oxide with carbon black contained 7.4% O, 6.4% free C, and 33.3% bound C. The free C was found to oxidize more rapidly and at a lower temperature than carbon carbide. The suggested method of determining free C in metallic beryllium is based on burn up of a weighed sample of the material in a stream of oxygen with subsequent gas-chromatographic measurement of the separated carbon dioxide. The quantity of carbon carbide in any of residues after direct determination of free carbon was found to be equal to its initial content. Results of the activation analysis confirm the accuracy of the method. Three figures, three tables, eight bibliographic references,

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Radiobiology

USSR

UDC 617-001.28-036.12-06:616.12-009.86

DENISOVA, Ye. A. and GORBARENKO, N. I., Institute of Industrial Hygiene and Occupational Diseases, Academy of Medical Sciences USSR

"Variations of the Syndrome of Neurocirculatory Dystonia in Persons Chronically Exposed to Radiation"

Moscow, Meditsinskaya Radiologiya, No 6, 1971, pp 43-48

Abstract: The authors report detailed clinical studies on the cardiovascular, nervous, and endocrine systems in 178 X-ray technicians, researchers handling radioisotopes, and other individuals working with sources of ionizing radiation for 10 to 20 years (total dose received 70 to 400 rem) showed most of them to be suffering from headaches, ready fatigability, cardiovascular and functional thyroid and adrenal disorders constituting the syndrome were distinguished according to the level of arterial pressure - hypotensive, hypertensive, and normal. The clinical symptoms and physiological reactions were largely the same as those of individuals suffering from neurocirculatory dystonia not resulting from occupational contact with ionizing radiation.

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Explosives and Explosions

USSR

UDC 541.427.6:126

DENISYUK, A. P., and ROGEL'ZANG, A. Ye., Moscow Chemical-Technological
Institute Imeni D. I. Mendeleev

"Temperature Profiles During the Burning of Ballistic Powder With an Anomalous
Burning-Pressure Relationship"

Ivanovo, IV 2, Khimiya i Khimicheskaya Tekhnologiya, Vol 14, No 6, 1971, pp
861-864

Abstract: Temperature distribution during the burning of a "N" type powder without a catalyst (control) and one containing lead-copper catalyst was studied in the 50-90 kg/cm² range, where they showed a positive dependence. The control sample showed an increased heat emission in k-phase with increased pressure, while the incoming heat from its smoke-gas zone showed a drop; the incoming heat component amounted to about 10-15% of the total. The sample with the catalyst behaved similarly in regard to the heat emission, but its incoming heat was lower - only about 4-5%. Analysis of the data in the pressure range 20-30 kg/cm² showed that even though the maximum flame temperature is about the same for both powders, the one with the catalyst shows a shorter period for the completion of gas reaction, so it
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USSR

DENISYUK, A. P., and FOGEL'ZANG, A. Ye., Khimiya i Khimicheskaya Tekhnologiya, Vol 14, No 6, 1971, pp 861-864

is concluded that the catalyst accelerates the reactions in the smoke-gas and gas zones, especially the reactions occurring in the k-phase. In the 60-90 kg/cm² range the rate of the burning drops in the powder with catalyst probably due to the "poisoning" effect of the catalyst.

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- 7 -

AA0043405

Soviet Inventions Illustrated, Section II Electrical, Derwent,

UR 0482

2/70

243101 WAVEGUIDE FILTER SECTION has a wide control range of the quality factor. One of the coupling apertures has a tee shape and is partly overlapped by a compensating plunger; the movement of the latter by ± 2 mm will change the quality factor by 20 - 50%. The wave in the waveguide is in the TE_{011} mode. A tuning plunger can be regulated by a spindle leading outside.

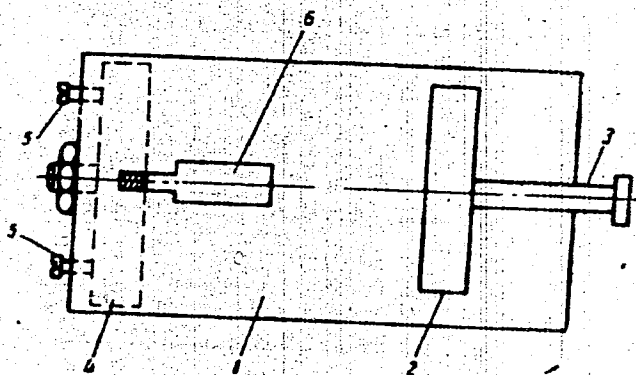
28.2.66 as 1058254/26-9. P. N. DENISYUK (16.9.69) Bul 16/5.5.69. Class 21g. Int. Cl. H 03 h.

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AA0043405



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AAO 043465

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 1/70

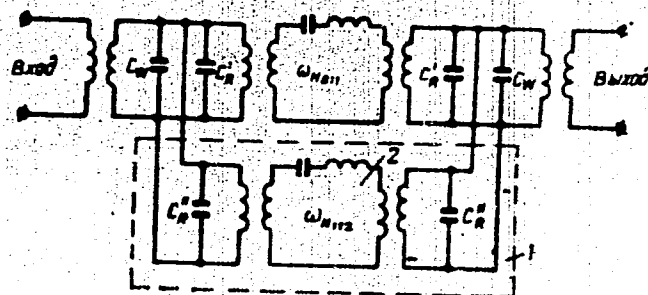
(242285 TUNABLE WAVEGUIDE FILTER SECTION has a constant band width during tuning because its equivalent circuit contains a correcting network 1 which connects input and output of the resonator. The main section is a round waveguide (H₀₁₁ type) and a tuning plunger. This correcting network has a diameter of 0.74λ with an H₁₁₂ oscillation and its resonance is near to the resonance of the working oscillation H₀₁₁. Its parameters have a marked frequency relationship because it contains a series network 2 with a strongly defined resonant frequency near the operating frequency of the main section. 3.3.66. as 1058860/26-9. P.V.DENISYUK. (12.9.69.) Bul.15/25.4.69. class 21g. Int.Cl. H03h.

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AA0043465



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19761831

USSR

UDC 669.187.26

KUDRYAVTSEV, M. M., VOINOV, S. G., VERKHOVSEV, E. V., DENISYUK, T. P., and SAFONOV, V. L.

"The Quality of Structural Steel of Different Smelting Methods in the Sorted Billet and After Electroslag Remelting"

Abstract: A comparative investigation was made of the properties of 30KhGSA, 40KhNMA, and 18Kh2N4VA structural steels smelted according to five variants: in basic 40-ton and 120-ton open-hearth furnaces (1&2); in a basic 120-ton open-hearth furnace with steel processed in the ladle by synthetic lime-aluminaceous slag (3); in a 20-ton arc furnace with basic lining (4), and in a 120-ton open-hearth furnace with intermediate production and subsequent deoxidation and alloying with liquid ligature alloy and simultaneous processing with synthetic slag in the ladle. Properties of the steels, content of harmful impurities, contamination by nonmetallic inclusions, and mechanical characteristics are discussed. Heat treatment of open-hearth steel processed by synthetic slags in the ladle or alloyed with liquid ligature makes it possible to use the metal for electroslag remelting. In this case, the quality of the metal of electroslag remelting does not worsen and the net cost decreases substantially. Three figures, three tables, seven bibliographic references.

1/1

USSR

UDC: 621.396.6-181.48

BRYUNIN, V. N., DENISYUK, V. A., KOZYR', I. Ya.

"Physicotechnical Methods of Quality Control of Integrated Circuits"

Elektron. prom-st'. Nauch.-tekhn. sb. (The Electronics Industry. Scientific and Technical Collection), 1972, No 1, pp 22-25 (from RZh-Radio-tekhnika, No 8, Aug 72, Abstract No 8V266)

Translation: The paper deals with the particulars of physicotechnical methods of checking microcircuits by using an X-ray TV microscope and a raster electron microscope. Resumé.

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1/2 019 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--SOME PROBLEMS OF COMPLEX TREATMENT OF PATIENTS WITH ULCER DISEASE
AT THE MORSHIN HEALTH RESORT -U-
AUTHOR--BORIN, YA.V., DENISYUK, V.G., SEREDYUK, N.N.
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 3, PP 39-41
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--GASTROINTESTINAL SYSTEM, DIGESTIVE DISEASE, DUODENUM, LESION,
MINERAL, WATER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1986/0951 STEP NO--UR/0475/70/000/003/0039/0041
CIRC ACCESSION NO--AP0102890
UNCLASSIFIED